

=> d his

(FILE 'HOME' ENTERED AT 13:03:42 ON 22 MAR 2002)

FILE 'REGISTRY' ENTERED AT 13:04:03 ON 22 MAR 2002

E THALIDOMIDE/CN

L1 1 S E3  
L2 5 S E3-E7  
L3 STRUCTURE UPLOADED  
L4 50 S L3

FILE 'CAPLUS, USPATFULL, WPIDS, MEDLINE, DRUGU, BIOSIS' ENTERED AT  
13:08:34 ON 22 MAR 2002

L5 5637 S L1  
L6 5637 S L2  
L7 69 S L4  
L8 57374 S ANGIOGENESIS  
L9 17436 S ANGIOGENESIS### (5A) INHIBITOR##  
L10 1 S L9 AND L7  
L11 286 S L9 AND L6  
L12 283759 S ANTIINFLAMMATOR#### OR ANTI-INFLAMMATOR#### OR ANTI INFLAMMAT  
L13 1852 S L9 AND L12  
L14 1 S L13 AND L7  
L15 33 S L13 AND L6  
L16 28 DUP REMOVE L15 (5 DUPLICATES REMOVED)

=> s (angiogenesis(5a)inhibit####) (8a) (antiinflammator#### or anti-inflammator####  
or anti inflammator####)

L17 114 (ANGIOGENESIS(5A) INHIBIT####) (8A) (ANTIINFLAMMATOR#### OR ANTI-I  
NFLAMMATOR#### OR ANTI INFLAMMATOR####)

=> s l17 and l7

L18 0 L17 AND L7

=> s l17 and l6

L19 6 L17 AND L6

=> dup remove l19

PROCESSING COMPLETED FOR L19

L20 4 DUP REMOVE L19 (2 DUPLICATES REMOVED)

=> d l20 1-4 bib,ab

L20 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1  
AN 2001:318260 CAPLUS  
DN 135:251525  
TI Differential effects of thalidomide on angiogenesis and tumor growth in  
mice  
AU Belo, Andrezza V.; Ferreira, Monica A. N. D.; Bosco, Adriana A.; Machado,  
Rosangela D. P.; Andrade, Silvia P.  
CS Departments of Physiology and Biophysics, Federal University of Minas  
Gerais, Belo Horizonte, Brazil  
SO Inflammation (New York, NY, United States) (2001), 25(2), 91-96  
CODEN: INFLD4; ISSN: 0360-3997  
PB Kluwer Academic/Plenum Publishers  
DT Journal  
LA English  
AB Thalidomide, clin. used as an **antiinflammatory** and antitumoral  
drug, **inhibited** sponge-induced **angiogenesis** when  
administered systemically (100 mg/kg-1) in mice. However, it failed to  
inhibit solid Ehrlich tumor in the same mouse strain. We have used  
functional, biochem. and histol. parameters to assess neovascularization  
and fibrovascular tissue infiltration of the mice sponge granuloma. The



neovascularization growth as detected by development of blood flow and Hb content extd. from the implants showed that thalidomide inhibited fibrovascular tissue formation by 40%. The functional and biochem. parameters correlated well with the histol. study. Thalidomide had no inhibitory effect in the development of Ehrlich tumor. The detection of this selective action using the same animal strain bearing two different processes, supports the hypothesis that rather than species specificity, thalidomide is tissue specific. This approach may be used to identify the specificity of other therapeutic agents against distinct angiogenesis-dependent diseases.

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2002 ACS

AN 2000:53401 CAPLUS

DN 132:88759

TI Prophylactic treatment of neovascularization in macular degeneration using anti-inflammatory steroids

IN Gillies, Mark Cedric; Penfold, Philip Leslie; Billson, Francis Alfred

PA The University of Sydney, Australia

SO PCT Int. Appl., 14 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002564	A1	20000120	WO 1999-AU565	19990712
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9947632	A1	20000201	AU 1999-47632	19990712
	EP 1104302	A1	20010606	EP 1999-930939	19990712
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	NO 2001000114	A	20010222	NO 2001-114	20010108
PRAI	AU 1998-4607	A	19980710		
	AU 1998-5847	A	19980911		
	WO 1999-AU565	W	19990712		

AB This invention relates to the prophylaxis of choroidal neovascularization in macular degeneration by the introduction of a suitable anti-inflammatory agent into the vitreous. In particular, it relates to the prophylaxis of neovascularization with an anti-inflammatory steroid, such as an 11-substituted 16.alpha.,17.alpha.-substituted methylenedioxy steroid of formula (I) wherein R1 and R2 are hydrogen or alkyl; -Ca-Cb- is -CH2-CH2-, -CH=CH-, -CH2CH(CH3)- or -CH=C(CH3)-; R3 is Me, hydroxymethyl or alkylcarbonyloxymethyl, methylaminoalkylenecarbonyloxymethyl, or phenylaminoalkylenecarbonyloxymethyl; R4 + R6 and R5 + R6 is epoxy; R5 is halogen; R6 is hydroxyl, keto, or alkanoyl. More particularly, it relates to prophylaxis with triamcinolone acetonide.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2000:341075 BIOSIS

DN PREV200000341075

TI Thalidomide: Current and potential clinical applications.

AU Calabrese, Leonard (1); Fleischer, Alan B., Jr.



CS (1) Department of Rheumatic and Immunologic Disease, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH, 44195 USA

SO American Journal of Medicine, (April 15, 2000) Vol. 108, No. 6, pp. 487-495. print.  
ISSN: 0002-9343.

DT General Review

LA English

SL English

AB More than three decades after its withdrawal from the world marketplace, thalidomide is attracting growing interest because of its reported immunomodulatory and anti-inflammatory properties. Current evidence indicates that thalidomide reduces the activity of the inflammatory cytokine tumor necrosis factor (TNF)-alpha by accelerating the degradation of its messenger RNA. Thalidomide also inhibits angiogenesis. Recently, the drug was approved for sale in the United States for the treatment of erythema nodosum leprosum, an inflammatory complication of Hansen's disease. However, it has long been used successfully in several other dermatologic disorders, including aphthous stomatitis, Behcet's syndrome, chronic cutaneous systemic lupus erythematosus, and graft-versus-host disease, the apparent shared characteristic of which is immune dysregulation. Many recent studies have evaluated thalidomide in patients with human immunodeficiency virus (HIV) infection; the drug is efficacious against oral aphthous ulcers, HIV-associated wasting syndrome, HIV-related diarrhea, and Kaposi's sarcoma. To prevent teratogenicity, a comprehensive program has been established to control access to the drug, including registration of prescribing physicians, dispensing pharmacies, and patients; mandatory informed consent and education procedures; and limitation of the quantity of drug dispensed. Clinical and, in some patients, electrophysiologic monitoring for peripheral neuropathy is indicated with thalidomide therapy. Other adverse effects include sedation and constipation. With appropriate safeguards, thalidomide may benefit patients with a broad variety of disorders for which existing treatments are inadequate.

L20 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2002 ACS

AN 1998:341491 CAPLUS

DN 129:12742

TI Methods and compositions using thalidomide or other **angiogenesis**  
-**inhibitory** compound and **anti-inflammatory**  
agent for **inhibition of angiogenesis**

IN D'Amato, Robert J.

PA Children's Medical Center, USA

SO PCT Int. Appl., 63 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9819649	A2	19980514	WO 1997-US20116	19971104
	WO 9819649	A3	19980625		
	W:	AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9851973	A1	19980529	AU 1998-51973	19971104
	EP 963200	A2	19991215	EP 1997-946884	19971104
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
PRAI	US 1996-28708P	P	19961105		



US 1997-963058    A    19971103  
WO 1997-US20116    W    19971104

OS    MARPAT 129:12742

AB    A group of compds. that effectively inhibit angiogenesis is provided. More specifically, thalidomide and various related compds., e.g. thalidomide precursors, analogs, metabolites and hydrolysis products, have been shown to inhibit angiogenesis and to treat disease states resulting from angiogenesis. Addnl., **antiinflammatory** drugs, such as steroids and NSAIDs can **inhibit angiogenesis**-dependent diseases either alone or in combination with thalidomide and related compds. Importantly, these compds. can be administered orally.



=> e thalidomide/cn

E1	1	THALIDICINE/CN
E2	1	THALIDINE/CN
E3	1 -->	THALIDOMIDE/CN
E4	1	THALIDOMIDE-ASPIRIN MIXT./CN
E5	1	THALIDOMIDE-INDOMETHACIN MIXT./CN
E6	1	THALIDOMIDE-PREDNISOLONE MIXT./CN
E7	1	THALIDOMIDE-PREDNISONE MIXT./CN
E8	1	THALIDOXINE/CN
E9	1	THALIDOXINE ACETATE/CN
E10	1	THALIFABATINE/CN
E11	1	THALIFABERIDINE/CN
E12	1	THALIFABERINE/CN

=> s e3

L1 1 THALIDOMIDE/CN

=> d l1

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS

RN 50-35-1 REGISTRY

CN 1H-Isoindole-1,3(2H)-dione, 2-(2,6-dioxo-3-piperidinyl)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Phthalimide, N-(2,6-dioxo-3-piperidyl)- (6CI, 7CI, 8CI)

OTHER NAMES:

CN (.+-.)-Thalidomide

CN .alpha.-(N-Phthalimido)glutarimide

CN .alpha.-N-Phthalylglutaramide

CN .alpha.-Phthalimidoglutaramide

CN 1,3-Dioxo-2-(2,6-dioxopiperidin-3-yl)isoindoline ;

CN 3-Phthalimidoglutaramide

CN Celgene

CN Contergan

CN Distaval

CN K 17

CN Kevadon

CN N-(2,6-Dioxo-3-piperidyl)phthalimide

CN N-Phthaloylglutamimide

CN Quetimid

CN Sedoval

CN Softenil

CN Softenon

CN Talimol

CN **Thalidomide**

CN Thalomid

FS 3D CONCORD

DR 14088-68-7, 731-40-8

MF C13 H10 N2 O4

CI COM

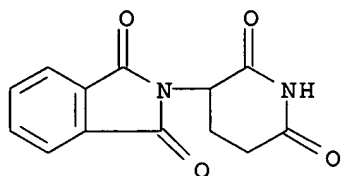
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*,  
BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS,  
CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHM, CSNB, DDFU,  
DIOGENES, DRUGNL, DRUGU, DRUGUPDATES, EMBASE, HODOC\*, HSDB\*, IPA,  
MEDLINE, MRCK\*, MSDS-OHS, NIOSHTIC, PHAR, PIRA, PROMT, RTECS\*, SPECINFO,  
SYNTHLINE, TOXCENTER, USAN, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)





\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

785 REFERENCES IN FILE CA (1967 TO DATE)  
 44 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 786 REFERENCES IN FILE CAPLUS (1967 TO DATE)  
 15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s e3-e7

1 THALIDOMIDE/CN  
 1 "THALIDOMIDE-ASPIRIN MIXT. "/CN  
 1 "THALIDOMIDE-INDOMETHACIN MIXT. "/CN  
 1 "THALIDOMIDE-PREDNISOLONE MIXT. "/CN  
 1 "THALIDOMIDE-PREDNISONE MIXT. "/CN  
 L2 5 (THALIDOMIDE/CN OR "THALIDOMIDE-ASPIRIN MIXT. "/CN OR "THALIDOMIDE-INDOMETHACIN MIXT. "/CN OR "THALIDOMIDE-PREDNISOLONE MIXT. "/CN OR "THALIDOMIDE-PREDNISONE MIXT. "/CN)

=>

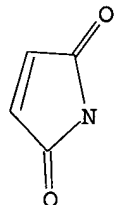
Uploading 09287377.str

L3 STRUCTURE UPLOADED

=> d 13

L3 HAS NO ANSWERS

L3 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 13

SAMPLE SEARCH INITIATED 13:07:18 FILE 'REGISTRY'  
 SAMPLE SCREEN SEARCH COMPLETED - 10774 TO ITERATE

9.3% PROCESSED 1000 ITERATIONS  
 INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
 SEARCH TIME: 00.00.01

50 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
 BATCH \*\*COMPLETE\*\*  
 PROJECTED ITERATIONS: 209270 TO 221690  
 PROJECTED ANSWERS: 127856 TO 137614

L4 50 SEA SSS SAM L3



=> file caplus, uspatfull, wpids, toxlit, medline, drugu, biosis  
'TOXLIT' IS NOT A VALID FILE NAME  
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files  
that are available. If you have requested multiple files, you can  
specify a corrected file name or you can enter "IGNORE" to continue  
accessing the remaining file names entered.

ENTER A FILE NAME OR (IGNORE):toxline

'TOXLINE' IS NOT A VALID FILE NAME

Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files  
that are available. If you have requested multiple files, you can  
specify a corrected file name or you can enter "IGNORE" to continue  
accessing the remaining file names entered.

ENTER A FILE NAME OR (IGNORE):ignore

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	28.14	28.29

FILE 'CAPLUS' ENTERED AT 13:08:34 ON 22 MAR 2002  
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FILE 'MEDLINE' ENTERED AT 13:08:34 ON 22 MAR 2002

FILE 'DRUGU' ENTERED AT 13:08:34 ON 22 MAR 2002  
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FILE 'BIOSIS' ENTERED AT 13:08:34 ON 22 MAR 2002  
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=> d his

(FILE 'HOME' ENTERED AT 13:03:42 ON 22 MAR 2002)

FILE 'REGISTRY' ENTERED AT 13:04:03 ON 22 MAR 2002  
E THALIDOMIDE/CN

L1	1 S E3
L2	5 S E3-E7
L3	STRUCTURE UPLOADED
L4	50 S L3

FILE 'CAPLUS, USPATFULL, WPIDS, MEDLINE, DRUGU, BIOSIS' ENTERED AT  
13:08:34 ON 22 MAR 2002

=> s l1

L5 5637 L1

=> s l2

L6 5637 L2

=> s l4

SAMPLE SEARCH INITIATED 13:09:09 FILE 'WPIDS'  
SAMPLE SCREEN SEARCH COMPLETED - 218 TO ITERATE

100.0% PROCESSED 218 ITERATIONS 50 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.02



FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 1739 TO 2621  
PROJECTED ANSWERS: 1003 TO 1697

L7 69 L4

=> s l3  
SUBSTANCE QUERIES NOT VALID IN THIS FILE  
SUBSTANCE QUERIES NOT VALID IN THIS FILE  
SAMPLE SEARCH INITIATED 13:09:22 FILE 'WPIDS'  
SAMPLE SCREEN SEARCH COMPLETED - 218 TO ITERATE

100.0% PROCESSED 218 ITERATIONS 50 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 1739 TO 2621  
PROJECTED ANSWERS: 1003 TO 1697

SUBSTANCE QUERIES NOT VALID IN THIS FILE  
FULL SEARCH INITIATED 13:09:24 FILE 'DRUGU'  
FULL SCREEN SEARCH COMPLETED - 757 TO ITERATE

100.0% PROCESSED 757 ITERATIONS 407 ANSWERS  
SEARCH TIME: 00.00.05

SUBSTANCE QUERIES NOT VALID IN THIS FILE  
The logic expression entered contains L#s or saved query names which correspond to structures built by the STRUCTURE command or to screen sets. These must be searched in a substance file such as the REGISTRY file. In some files you may use a Registry Number answer set from a structure search as a search term or profile in some bibliographic file containing Registry Numbers, e.g. the CA file. For an explanation, enter "HELP CROSSOVER" at an arrow prompt (=>).

=> d his

(FILE 'HOME' ENTERED AT 13:03:42 ON 22 MAR 2002)

FILE 'REGISTRY' ENTERED AT 13:04:03 ON 22 MAR 2002

E THALIDOMIDE/CN

L1 1 S E3  
L2 5 S E3-E7  
L3 STRUCTURE UPLOADED  
L4 50 S L3

FILE 'CAPLUS, USPATFULL, WPIDS, MEDLINE, DRUGU, BIOSIS' ENTERED AT 13:08:34 ON 22 MAR 2002

L5 5637 S L1  
L6 5637 S L2  
L7 69 S L4

=> s angiogenesis  
L8 57374 ANGIOGENESIS

=> s angiogenesis###(5a)inhibitor##  
L9 17436 ANGIOGENESIS###(5A) INHIBITOR##

=> s l9 and l7  
L10 1 L9 AND L7



```

=> s l9 and l6
L11      286 L9 AND L6

=> s antiinflammator#### or anti-inflammator#### or anti inflammator####
L12      283759 ANTIINFLAMMATOR#### OR ANTI-INFLAMMATOR#### OR ANTI INFLAMMATOR#
      ###

=> s l9 and l12
L13      1852 L9 AND L12

=> s l13 and l7
L14      1 L13 AND L7

=> s l13 and l6
L15      33 L13 AND L6

=> dup remove l15
PROCESSING COMPLETED FOR L15
L16      28 DUP REMOVE L15 (5 DUPLICATES REMOVED)

=> d l16 1-28 bib,ab

L16 ANSWER 1 OF 28  USPATFULL
AN      2002:37907  USPATFULL
TI      Inhibition of cyclooxygenase-2activity
IN      Dannenberg, Andrew J., New York, NY, UNITED STATES
      Muller, George, Bridgewater, NJ, UNITED STATES
PI      US 2002022627      A1  20020221
AI      US 2001-823057      A1  20010330 (9)
PRAI    US 2000-193981P      20000331 (60)
DT      Utility
FS      APPLICATION
LREP    MATHEWS, COLLINS, SHEPHERD & GOULD, P.A., 100 THANET CIRCLE, SUITE 306,
      PRINCETON, NJ, 08540-3674
CLMN    Number of Claims: 2
ECL     Exemplary Claim: 1
DRWN    No Drawings
LN.CNT  275
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      The present invention provides new methods for inhibiting the activity
      of the enzyme cyclooxygenase-2 (or COX-2). Inhibitors of COX-2 are know
      to be useful anti-inflammatory, analgesic and
      anti-angiogenic agents. The compounds in the present case are
      heterocyclic substituted 4-aminoglutarimides. Methods of using the
      compounds to inhibit prostaglandin synthesis are claimed.

L16 ANSWER 2 OF 28  USPATFULL
AN      2001:185309  USPATFULL
TI      Tyrosine kinase inhibitors
IN      Fraley, Mark E., North Wales, PA, United States
      Arrington, Kenneth L., Elkins Park, PA, United States
      Bilodeau, Mark T., Lansdale, PA, United States
      Hartman, George D., Lansdale, PA, United States
      Hoffman, William F., Lansdale, PA, United States
      Kim, Yuntae, Harleysville, PA, United States
      Hungate, Randall W., Newbury Park, CA, United States
PA      Merck & Co., Inc., Rahway, NJ, United States (U.S. corporation)
PI      US 6306874      B1  20011023
AI      US 2000-690598      20001017 (9)
PRAI    US 1999-160356P      19991019 (60)
DT      Utility
FS      GRANTED
EXNAM    Primary Examiner: Shah, Mukund J.; Assistant Examiner: Truong, Tamthom

```



N.  
LREP Garcia-Rivas, J. Antonio, Daniel, Mark R.  
CLMN Number of Claims: 36  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 3068

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to compounds which inhibit, regulate and/or modulate tyrosine kinase signal transduction, compositions which contain these compounds, and methods of using them to treat tyrosine kinase-dependent diseases and conditions, such as angiogenesis, cancer, tumor growth, atherosclerosis, age related macular degeneration, diabetic retinopathy, inflammatory diseases, and the like in mammals.

L16 ANSWER 3 OF 28 CAPLUS COPYRIGHT 2002 ACS

AN 2001:705991 CAPLUS

DN 136:47943

TI Thalidomide is distributed into human semen after oral dosing

AU Teo, Steve K.; Harden, Jill L.; Burke, Alison B.; Noormohamed, Faruq H.; Youle, Mike; Johnson, Margaret A.; Peters, Barry S.; Stirling, David I.; Thomas, Steve D.

CS Celgene Corporation, Warren, NJ, 07059, USA

SO Drug Metabolism and Disposition (2001), 29(10), 1355-1357

CODEN: DMDSAI; ISSN: 0090-9556

PB American Society for Pharmacology and Experimental Therapeutics

DT Journal

LA English

AB As part of a double-blind placebo-controlled study of the effect of thalidomide on body wt. and the viral load of human immunodeficiency virus-seropos. patients, blood plasma and semen samples were analyzed for the presence of thalidomide. Patients were orally dosed with 100 mg of thalidomide/day for 8 wk. Blood samples were obtained at baseline and weeks 4, 8, and 12, and semen was obtained at baseline and weeks 4 and 8. Samples were extd. with solid-phase cartridges and analyzed by liq. chromatog./tandem mass spectrometry using atm. pressure chem. ionization in the neg. ion mode. Two of 4 patients taking thalidomide were able to provide semen samples. Both had detectable levels of thalidomide in their plasma (10-350 ng/mL) and semen (10-250 ng/g) at weeks 4 and 8. There was an apparent correlation between plasma and semen levels. Semen levels could be significantly greater for therapeutic doses of more than 100 mg/day. Since the threshold dose for birth defects and thalidomide exposure is not known, male patients are advised to use barrier contraception.

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 4 OF 28 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2002-03184 DRUGU P

TI The anti-angiogenic agents angiostatin and thalidomide inhibit cervical cancer growth in a murine model.

AU Stanford Downs L; Ramakrishnan S

CS Univ.Minnesota

LO Minneapolis, Minn., USA

SO Proc.Am.Assoc.Cancer Res. (42, 92 Meet., 584, 2001) ISSN:  
0197-016X

AV The University of Minnesota, Minneapolis, MN, U.S.A.

LA English

DT Journal

FA AB; LA; CT

FS Literature

AB The effects of antiangiogenic agents on the growth of human papilloma virus positive squamous-cell cervical cancer cells were studied. Murine angiostatin and thalidomide both inhibited the growth of tumor xenografts in nude mice. Angiostatin but not thalidomide inhibited basic fibroblast



growth factor stimulated proliferation of human umbilical vein endothelial cells in-vitro. The results suggest that antiangiogenic drugs may be clinically useful in squamous-cell cervical carcinoma. (conference abstract: 92nd Annual Meeting of the American Association for Cancer Research, New Orleans, Louisiana, USA, 2001). (No EX).

- L16 ANSWER 5 OF 28 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD  
AN 2001-33250 DRUGU P  
TI A difference between the rat and mouse in the pharmacokinetic interaction of 5,6-dimethylxanthenone-4-acetic acid with thalidomide.  
AU Zhou S; Kestell P; Tingle M D; Ching L M; Paxton J W  
CS Univ.Auckland  
LO Auckland, N.Z.  
SO Cancer Chemother.Pharmacol. (47, No. 6, 541-44, 2001) 2 Tab. 31 Ref.  
CODEN: CCPHDZ ISSN: 0344-5704  
AV Department of Pharmacology and Clinical Pharmacology, The University of Auckland School of Medicine, Private Bag 92019, Auckland, New Zealand. (J.W.P.; e-mail: j.paxton@auckland.ac.nz).  
LA English  
DT Journal  
FA AB; LA; CT  
FS Literature  
AB No significant alteration in the plasma concentration profile for i.v. 5,6-dimethylxanthenone-4-acetic acid (DMXAA, NSC-640488) was seen following i.p. L-thalidomide (L-Thal) pretreatment in rats. However, when rats were pretreated with i.p. diclofenac or i.p. cyproheptadine (both Sigma-Aldrich), the plasma AUC and half-life of DMXAA were significantly increased. In rat liver microsomes, diclofenac inhibited glucuronidation and 6-methylhydroxylation of DMXAA, while cyproheptadine inhibited glucuronidation, but not 6-methylhydroxylation. L-Thal resulted in negligible inhibition of DMXAA metabolism in rat liver microsomes. In contrast to previous murine studies, co-administration of L-Thal in rats did not alter the pharmacokinetics of DMXAA.
- L16 ANSWER 6 OF 28 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD  
AN 2002-02680 DRUGU P T S  
TI Clinical pharmacology of thalidomide.  
AU Eriksson T; Bjorkman S; Hoglund P  
CS Univ.Lund; Univ.Malmo  
LO Lund; Malmo, Swed.  
SO Eur.J.Clin.Pharmacol. (57, No. 5, 365-76, 2001) 2 Fig. 5 Tab. 87 Ref.  
CODEN: EJCPAS ISSN: 0031-6970  
AV Hospital Pharmacy, University Hospital, 221 85 Lund, Sweden. (e-mail: tommy.eriksson@apoteket.se).  
LA English  
DT Journal  
FA AB; LA; CT  
FS Literature  
AB The clinical pharmacology of thalidomide (THAL) is reviewed with emphasis on the chemistry and chirality, pharmacokinetics, pharmacodynamics, clinical use, adverse effects and dose/administration. (S)-THAL was introduced as a sedative drug in the late 1950s, but in 1961, it was withdrawn due to teratogenicity and neuropathy. However, there is now a growing clinical interest in THAL due to its unique **antiinflammatory**, antiangiogenic and immunomodulatory effects. Inter-individual variability in distribution and elimination are low. Rational use of THAL is problematic due to lack of basic knowledge of its mechanism of action, effects of the separate enantiomers and metabolites and dose- and concentration-effect relationships.
- L16 ANSWER 7 OF 28 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD  
AN 2001-24865 DRUGU M P  
TI In vitro and in vivo kinetic interactions of the antitumour agent 5,6-dimethylxanthenone-4-acetic acid with thalidomide and diclofenac.



AU Zhou S; Paxton J W; Kestell P; Tingle M D; Ching L M  
LO Auckland, N.Z.  
SO Cancer Chemother.Pharmacol. (47, No. 4, 319-26, 2001) 2 Fig. 3 Tab. 37  
Ref.  
CODEN: CCPHDZ ISSN: 0344-5704  
AV Department of Pharmacology and Clinical Pharmacology, The University of  
Auckland School of Medicine, Private Bag 92019, Auckland, New Zealand.  
(J.W.P.). (e-mail: j.paxton@auckland.ac.nz).  
LA English  
DT Journal  
FA AB; LA; CT  
FS Literature  
AB Pretreatment with i.p. diclofenac (DIC, Sigma-Aldrich) increased the AUC  
of 5,6-dimethylxanthenone-4-acetic acid (DM) whereas L-thalidomide (L-TA)  
produced only little or no increase in AUC of DM in a controlled study of  
mice. In vitro, DIC competitively inhibited DM glucuronidation and  
6-methylhydroxylation (6-MET) in male and female mice and human  
microsomes. L-TA dose-dependently reduced 6-MET in all mice and human  
microsomes. L-TA and DIC increased the plasma AUC and elimination  
half-life of DM. DIC and L-TA had no effect on the in vitro plasma  
protein binding of DM in mouse or human plasma. Results show that a model  
based on the direct inhibition of metabolism appears to be appropriate  
for the prediction of DIC-DM pharmacokinetic interactions in mice and  
humans in vivo, but is inappropriate for the prediction of L-TA-DM  
pharmacokinetic interactions.

L16 ANSWER 8 OF 28 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1

AN 2001:318260 CAPLUS

DN 135:251525

TI Differential effects of thalidomide on angiogenesis and tumor growth in  
mice

AU Belo, Andrezza V.; Ferreira, Monica A. N. D.; Bosco, Adriana A.; Machado,  
Rosangela D. P.; Andrade, Silvia P.

CS Departments of Physiology and Biophysics, Federal University of Minas  
Gerais, Belo Horizonte, Brazil

SO Inflammation (New York, NY, United States) (2001), 25(2), 91-96

CODEN: INFLD4; ISSN: 0360-3997

PB Kluwer Academic/Plenum Publishers

DT Journal

LA English

AB Thalidomide, clin. used as an **antiinflammatory** and antitumoral  
drug, inhibited sponge-induced angiogenesis when administered systemically  
(100 mg/kg-1) in mice. However, it failed to inhibit solid Ehrlich tumor  
in the same mouse strain. We have used functional, biochem. and histol.  
parameters to assess neovascularization and fibrovascular tissue  
infiltration of the mice sponge granuloma. The neovascularization growth  
as detected by development of blood flow and Hb content extd. from the  
implants showed that thalidomide inhibited fibrovascular tissue formation  
by 40%. The functional and biochem. parameters correlated well with the  
histol. study. Thalidomide had no inhibitory effect in the development of  
Ehrlich tumor. The detection of this selective action using the same  
animal strain bearing two different processes, supports the hypothesis  
that rather than species specificity, thalidomide is tissue specific.  
This approach may be used to identify the specificity of other therapeutic  
agents against distinct angiogenesis-dependent diseases.

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 9 OF 28 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2

AN 2001:161292 CAPLUS

DN 135:204591

TI Thalomid (thalidomide) capsules: A review of the first 18 months of  
spontaneous postmarketing adverse event surveillance, including off-label  
prescribing



AU Clark, Todd E.; Edom, Norma; Larson, Janice; Lindsey, Laura J.  
 CS Drug Safety Department, Celgene Corporation, Warren, NJ, USA  
 SO Drug Safety (2001), 24(2), 87-117  
 CODEN: DRSAEA; ISSN: 0114-5916  
 PB Adis International Ltd.  
 DT Journal; General Review  
 LA English  
 AB A review with 142 refs. The sedative/hypnotic thalidomide was withdrawn from the worldwide market nearly 40 yr ago, because of its teratogenic and neurotoxic effects. Thalidomide was later found to very effectively suppress erythema nodosum leprosum (ENL). The US Food and Drug Administration (FDA) has approved Thalomid (thalidomide) capsules for the acute treatment of the cutaneous manifestations of moderate to severe ENL. Thalidomide is currently under investigation for the treatment of a wide variety of diseases, including conditions thought to have an inflammatory or immune basis, malignancies and complications of infection with HIV. Interest in the potential **anti-inflammatory**, immunomodulatory and anti-angiogenic effects of thalidomide has resulted in off-label use of prescription thalidomide. During the first 18 mo of spontaneous postmarketing adverse event surveillance for Thalomid, 1210 spontaneous postmarketing adverse event reports were received for patients treated with prescription thalidomide for all therapeutic indications, including off-label use. The most common adverse events spontaneously reported would have been expected on the basis of the current Thalomid labeling/product information. The current labeling/product information reflects what was known about the risks assocd. with thalidomide therapy in limited patient populations at the time of the approval of Thalomid. With the postmarketing use of thalidomide in populations other than patients with ENL, it becomes increasingly important to identify patient groups that may be particularly susceptible to specific adverse drug effects and to identify conditions under which specific adverse events may be more likely to occur. Oncol. patients may represent a patient population with increased susceptibility to thalidomide-assocd. adverse effects, including thromboembolic events. Consideration of the spontaneous postmarketing safety surveillance data may help to identify and characterize factors assocd. with increased risk in this and other patient groups. Serious unexpected adverse events reported with sufficient frequency to signal previously undetected product-event assocns. for which there may potentially be plausible evidence to suggest a causal relationship have included seizures and Stevens-Johnson syndrome. The potential effects of thalidomide on wound healing are also being closely monitored. Premarketing human clin. trials of drug products are inherently limited in their ability to detect adverse events. Broader postmarketing experience with thalidomide in more varied patient populations and more experience in the setting of long term thalidomide use will increase our ability to detect rare adverse events and to identify signals that may need to be evaluated in more controlled settings.

RE.CNT 142 THERE ARE 142 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 10 OF 28 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD  
 AN 2001-47513 DRUGU P  
 TI Thalidomide inhibits inflammatory and angiogenic activation of human intestinal microvascular endothelial cells (HIMEC).  
 AU Stein D J; Rafiee P; Taras A; Lamirand T H; Fisher P J; Ogawa H; Telford G L; Otterson M F; Johnson C P; Binion D G  
 CS Wisconsin-Med.Coll.  
 LO Milwaukee, Wis., USA  
 SO Gastroenterology (120, No. 5, Suppl. 1, A278, 2001)  
 CODEN: GASTAB ISSN: 0016-5085  
 AV Medical College of Wisconsin, Milwaukee, Wisconsin, U.S.A.  
 LA English  
 DT Journal



FA AB; LA; CT  
 FS Literature  
 AB The effect of thalidomide (Celgene) on primary cultures of human intestinal microvascular endothelial cells (HIMEC) activation, leukocyte interaction and angiogenesis was investigated in-vitro. Thalidomide potently inhibited HIMEC inflammatory and angiogenic activation. The results suggest a therapeutic role for thalidomide in the treatment of Crohn's disease. (conference abstract: 102nd Annual Meeting of the American Gastroenterological Association, Atlanta, Georgia, USA, 2001).

L16 ANSWER 11 OF 28 CAPLUS COPYRIGHT 2002 ACS

AN 2000:456819 CAPLUS

DN 133:84238

TI 3-heteroarylidenyl-2-indolinone compounds for modulating protein kinase activity and for use in cancer chemotherapy

IN Langecker, Peter J.; Shawver, Laura Kay; Tang, Peng Cho; Sun, Li

PA Sugen, Inc., USA

SO PCT Int. Appl., 148 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000038519	A1	20000706	WO 1999-US31232	19991230
	W:				
	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM,				
	RW:				
	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	BR 9916735	A	20010925	BR 1999-16735	19991230
	EP 1139754	A1	20011010	EP 1999-966725	19991230
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	WO 2001049287	A1	20010712	WO 2000-US18058	20000630
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 1998-114313P	P	19981231		
	US 1999-476232	A	19991230		
	WO 1999-US31232	W	19991230		
	US 2000-569545	A	20000512		

OS MARPAT 133:84238

AB 3-Heteroarylidenyl-2-indolinone compds. are provided that modulate the enzymic activity of protein kinases and therefore are expected to be useful in the prevention and treatment of protein kinase-related cellular disorders, e.g. cancer. Furthermore, these compds. are expected to enhance the efficacy of other chemotherapeutic agents, in particular, fluorinated pyrimidines, in the treatment of cancer.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 12 OF 28 CAPLUS COPYRIGHT 2002 ACS

AN 2000:53401 CAPLUS

DN 132:88759



TI Prophylactic treatment of neovascularization in macular degeneration using  
**anti-inflammatory** steroids  
IN Gillies, Mark Cedric; Penfold, Philip Leslie; Billson, Francis Alfred  
PA The University of Sydney, Australia  
SO PCT Int. Appl., 14 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002564	A1	20000120	WO 1999-AU565	19990712
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG AU 9947632 A1 20000201 AU 1999-47632 19990712 EP 1104302 A1 20010606 EP 1999-930939 19990712 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO NO 2001000114 A 20010222 NO 2001-114 20010108 PRAI AU 1998-4607 A 19980710 AU 1998-5847 A 19980911 WO 1999-AU565 W 19990712				

AB This invention relates to the prophylaxis of choroidal neovascularization in macular degeneration by the introduction of a suitable **anti-inflammatory** agent into the vitreous. In particular, it relates to the prophylaxis of neovascularization with an **anti-inflammatory** steroid, such as an 11-substituted 16.alpha.,17.alpha.-substituted methylenedioxy steroid of formula (I) wherein R1 and R2 are hydrogen or alkyl; -Ca-Cb- is -CH2-CH2-, -CH=CH-, -CH2CH(CH3)- or -CH=C(CH3)-; R3 is Me, hydroxymethyl or alkylcarbonyloxymethyl, methylaminoalkylenecarbonyloxymethyl, or phenylaminoalkylenecarbonyloxymethyl; R4 + R6 and R5 + R6 is epoxy; R5 is halogen; R6 is hydroxyl, keto, or alkanoyl. More particularly, it relates to prophylaxis with triamcinolone acetonide.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 13 OF 28 MEDLINE  
AN 2001068861 MEDLINE  
DN 20386262 PubMed ID: 10933131  
TI Intravenous formulations of the enantiomers of thalidomide:  
pharmacokinetic and initial pharmacodynamic characterization in man.  
AU Eriksson T; Bjorkman S; Roth B; Hoglund P  
CS Hospital Pharmacy, Malmo University Hospital, Sweden.  
SO JOURNAL OF PHARMACY AND PHARMACOLOGY, (2000 Jul) 52 (7) 807-17.  
Journal code: JNR. ISSN: 0022-3573.  
CY ENGLAND: United Kingdom  
DT (CLINICAL TRIAL)  
Journal; Article; (JOURNAL ARTICLE)  
(RANDOMIZED CONTROLLED TRIAL)  
LA English  
FS Priority Journals  
EM 200101  
ED Entered STN: 20010322  
Last Updated on STN: 20010322  
Entered Medline: 20010104  
AB Thalidomide, a racemate, is coming into clinical use as an



immunomodulating and **antiinflammatory** drug. These effects may chiefly be exerted by S-thalidomide, but the enantiomers are interconverted in-vivo. Thalidomide is given orally, although parenteral administration would be desirable in some clinical situations. The aim of this study was to prepare solutions of the enantiomers of thalidomide for intravenous administration and to investigate their pharmacokinetics and sedative effects following infusion in man. Solubility and stability of the enantiomers in 5% glucose solution was investigated. After a dose-determination experiment in one subject, six healthy male volunteers received R- and S-thalidomide separately by 1-h infusions in a randomized double-blind cross-over study. Blood was sampled over 22h and sedative effects were recorded. Blood concentrations of the enantiomers were determined by stereospecific HPLC. A four-compartment model consisting of a two-compartment model for each enantiomer, with elimination from both compartments, connected by rate constants for chiral inversion was fitted to the concentration data, while the sedative effects were correlated with the blood concentrations of R- and S-thalidomide by means of logistic regression. The enantiomers of thalidomide were chemically stable in solution for at least a week at room temperature. The infusions were well tolerated. Sedation, which was the only observed effect, was related to the blood concentration of R-thalidomide. Inter-individual variation in the disposition of the enantiomers was modest (e.g. terminal half-lives ranged between 3.9 and 5.3h). Pharmacokinetic modelling predicted that varying the infusion time of a fixed dose of S-thalidomide between 10 min and 6h would have little influence on the maximal blood concentration of formed R-thalidomide. To our knowledge this is the first time that thalidomide has been administered intravenously.

L16 ANSWER 14 OF 28 MEDLINE DUPLICATE 3  
 AN 2000245091 MEDLINE  
 DN 20245091 PubMed ID: 10781782  
 TI Thalidomide: current and potential clinical applications.  
 AU Calabrese L; Fleischer A B  
 CS Department of Rheumatic and Immunologic Disease, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio, USA.  
 SO AMERICAN JOURNAL OF MEDICINE, (2000 Apr 15) 108 (6) 487-95. Ref: 96  
 Journal code: 3JU; 0267200. ISSN: 0002-9343.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 General Review; (REVIEW)  
 (REVIEW, TUTORIAL)  
 LA English  
 FS Abridged Index Medicus Journals; Priority Journals  
 EM 200006  
 ED Entered STN: 20000629  
 Last Updated on STN: 20000629  
 Entered Medline: 20000616  
 AB More than three decades after its withdrawal from the world marketplace, thalidomide is attracting growing interest because of its reported immunomodulatory and **anti-inflammatory** properties. Current evidence indicates that thalidomide reduces the activity of the inflammatory cytokine tumor necrosis factor (TNF)-alpha by accelerating the degradation of its messenger RNA. Thalidomide also inhibits angiogenesis. Recently, the drug was approved for sale in the United States for the treatment of erythema nodosum leprosum, an inflammatory complication of Hansen's disease. However, it has long been used successfully in several other dermatologic disorders, including aphthous stomatitis, Behcet's syndrome, chronic cutaneous systemic lupus erythematosus, and graft-versus-host disease, the apparent shared characteristic of which is immune dysregulation. Many recent studies have evaluated thalidomide in patients with human immunodeficiency virus (HIV) infection; the drug is efficacious against oral aphthous ulcers, HIV-associated wasting syndrome, HIV-related diarrhea, and Kaposi's sarcoma. To prevent teratogenicity, a comprehensive program has been



established to control access to the drug, including registration of prescribing physicians, dispensing pharmacies, and patients; mandatory informed consent and education procedures; and limitation of the quantity of drug dispensed. Clinical and, in some patients, electrophysiologic monitoring for peripheral neuropathy is indicated with thalidomide therapy. Other adverse effects include sedation and constipation. With appropriate safeguards, thalidomide may benefit patients with a broad variety of disorders for which existing treatments are inadequate.

L16 ANSWER 15 OF 28 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD  
AN 2000-31947 DRUGU P V  
TI Angiogenesis inhibition in cancer prevention: a quantitative angiogenesis model for efficacy testing of chemopreventive agents.  
AU Sharma S; Ghoddoussi M C; Gao P; Kelloff G J; Steele V E; Kopelovich L  
CS ManTech; Nat.Cancer-Inst.Rockville  
LO Research Triangle Park, N.C.; Rockville, Md., USA  
SO Proc.Am.Assoc.Cancer Res. (41, 91 Meet., 411, 2000) ISSN:  
0197-016X  
AV ManTech Environmental Technology, RTP, NC, U.S.A.  
LA English  
DT Journal  
FA AB; LA; CT  
FS Literature  
AB A quantitative in-vivo angiogenesis inhibition assay was developed to test the efficacy of chemopreventive agents such as thalidomide (TH), aspirin (AS), piroxicam (PC), curcumin (CM), sulindac (SU), 13-cis-retinoic acid (13-cis-RA, isotretinoin), 9-cis-retinoic acid (9-cis-RA), all-trans-retinoic acid (tretinoin, TT) and 4-hydroxyphenyl retinamide (4-HPR, fenretinide) using the chick chorioallantoic membrane (CAM) model and an oncogene-transfected angiogenic cell line (6 Ti ras/SV myc # 4). Angiogenesis inhibition is another desirable attribute for chemopreventive agents belonging to different chemical classes or biological activities. (conference abstract: 91st Annual Meeting of the American Association for Cancer Research, San Francisco, California, USA, 2000).

L16 ANSWER 16 OF 28 USPATFULL  
AN 1999:1647 USPATFULL  
TI Methods for inhibiting proliferation of tumor cells and tumor growth  
IN Backer, Joseph M., Tenaflly, NJ, United States  
Bohlen, Peter, Cortland Manor, NY, United States  
PA American Cyanamid Company, Madison, NJ, United States (U.S. corporation)  
PI US 5856315 19990105  
AI US 1998-84484 19980526  
RLI Division of Ser. No. US 1994-354694, filed on 13 Dec 1994  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Sayala, Chhaya D.  
LREP Nagy, Michael R.  
CLMN Number of Claims: 6  
ECL Exemplary Claim: 1  
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)  
LN.CNT 787  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB The invention relates to a method for inhibiting angiogenesis and proliferation of endothelial cells by administering an inhibitory amount of 7-[substituted amino]-9-[(substituted glycy)amido]-6-demethyl-6-deoxytetracycline of Formula I: ##STR1## wherein R, R.sub.2, R.sub.3, and W are as defined in the specification. The invention also relates to a method for inhibiting proliferation of tumor cells and tumor growth by administering an inhibitory amount of a compound of Formula I in combination with a chemotherapeutic agent or radiation therapy. The invention also relates to compositions containing an effective inhibitory amount of a compound of Formula I in a pharmaceutically



acceptable carrier.

- L16 ANSWER 17 OF 28 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD  
AN 1999-27327 DRUGU P  
TI **Angiogenesis** activators and **inhibitors** differentially regulate caveolin-1 expression and caveolae formation in vascular endothelial cells.  
AU Liu J; Razani B; Tang S; Terman B I; Ware J A; Lisanti M P  
CS Albert-Einstein-Coll.Med.  
LO New York, N.Y., USA  
SO J.Biol.Chem. (274, No. 22, 15781-85, 1999) 5 Fig. 54 Ref.  
CODEN: JBCHA3 ISSN: 0021-9258  
AV Dept. of Molecular Pharmacology, Albert Einstein College of Medicine, 1300 Morris Park Ave., Bronx, NY 10461, U.S.A. (M.P.L.). (e-mail: lisanti@aecom.yu.edu).  
LA English  
DT Journal  
FA AB; LA; CT  
FS Literature  
AB The effect of angiogenesis activators, vascular endothelial growth factor (VEGF, Peprotech), basic fibroblast growth factor (bFGF, Upstate-Biotechnology) and hepatocyte growth factor (HGF, Sigma-Chem.) and **angiogenesis inhibitors** angiostatin (AS, **Angiogenesis**-Res.Ind.), fumagillin (FG), 2-methoxyestradiol (ME, both Calbiochem), transforming growth factor-beta (TGF, Upstate-Biotechnol.), thalidomide (TD) and PD-98059 (PD, both Calbiochem) on caveolin-1 expression and caveolae formation in vascular endothelial ECV-304 cells was investigated in-vitro. VEGF, bFGF and HGF all down-regulated the expression of caveolin-1. AS, FG, ME, TGF, TD and PD all selectively blocked the ability of VEGF to induce the down-regulation of caveolin-1. In conclusion, down-regulation of caveolin-1 may be an important step along the pathway toward endothelial cell proliferation.
- L16 ANSWER 18 OF 28 CAPLUS COPYRIGHT 2002 ACS  
AN 1999:760382 CAPLUS  
DN 132:73073  
TI Thalidomide as an emerging immunotherapeutic agent  
AU Marriott, J. B.; Muller, G.; Dalglish, A. G.  
CS Dept of Cellular and Molecular Sciences, Division of Oncology, St George's Hospital Medical School, London, UK  
SO Immunol. Today (1999), 20(12), 538-540  
CODEN: IMTOD8; ISSN: 0167-4919  
PB Elsevier Science Ltd.  
DT Journal; General Review  
LA English  
AB A review with 52 refs. Thalidomide first hit the headlines with alarming reports of birth defects after pregnant women took the drug to combat morning sickness. Now, the drug has been shown to have important immunomodulatory and **anti-inflammatory** effects that may be useful in the treatment of AIDS and cancer.
- RE.CNT 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L16 ANSWER 19 OF 28 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 4  
AN 1999:68675 CAPLUS  
DN 130:291172  
TI Combination oral antiangiogenic therapy with thalidomide and sulindac inhibits tumor growth in rabbits  
AU Verheul, H. M. W.; Panigrahy, D.; Yuan, J.; D'Amato, R. J.  
CS Department of Surgery, Children's Hospital, Harvard Medical School, Boston, MA, 02115, USA  
SO Br. J. Cancer (1999), 79(1), 114-118  
CODEN: BJCAAI; ISSN: 0007-0920  
PB Churchill Livingstone



DT Journal  
LA English  
AB Neovascularization facilitates tumor growth and metastasis formation. In our lab., we attempt to identify clin. available oral efficacious drugs for antiangiogenic activity. Here, we report which non-steroidal **anti-inflammatory** drugs (NSAIDs) can inhibit corneal neovascularization, induced by basic fibroblast growth factor (bFGF) or vascular endothelial growth factor (VEGF). This antiangiogenic activity may contribute to the known effects of NSAIDs on gastric ulcers, polyps and tumors. We found that sulindac was one of the most potent antiangiogenic NSAIDs, inhibiting bFGF-induced neovascularization by 50% and VEGF-induced neovascularization by 55%. Previously, we reported that thalidomide inhibited growth factor-induced corneal neovascularization. When we combined sulindac with thalidomide, we found a significantly increased inhibition of bFGF- or VEGF-induced corneal neovascularization (by 63% or 74% resp.) compared with either agent alone (P < 0.01). Because of this strong antiangiogenic effect, we tested the oral combination of thalidomide and sulindac for its ability to inhibit the growth of V2 carcinoma in rabbits. Oral treatment of thalidomide or sulindac alone inhibited tumor growth by 55% and 35% resp. When given together, the growth of the V2 carcinoma was inhibited by 75%. Our results indicated that oral antiangiogenic combination therapy with thalidomide and sulindac may be a useful non-toxic treatment for cancer.

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 20 OF 28 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD  
AN 2000-01016 DRUGU P S  
TI Phosphodiesterase inhibitors prevent NSAID enteropathy independently of effects on TNF-alpha release.  
AU Reuter B K; Wallace J L  
CS Univ.Calgary  
LO Calgary, Alb., Can.  
SO Am.J.Physiol. (277, No. 4, Pt. 1, G847-G854, 1999) 9 Fig. 39 Ref.  
CODEN: AJPHAP ISSN: 0002-9513  
AV Dept. of Pharmacology and Therapeutics, University of Calgary, 330 Hospital Dr. NW, Calgary, AB, Canada T2N 4N1. (J.L.W.). (e-mail: wallacej@ucalgary.ca).  
LA English  
DT Journal  
FA AB; LA; CT  
FS Literature  
AB The effect of various TNF-alpha inhibitors including phosphodiesterase inhibitors (pentoxifylline, theophylline and rolipram), thalidomide and anti-TNF-alpha antibodies was studied in rats with small intestinal injury induced by the NSAID p.o. diclofenac. The study showed that TNF-alpha does not appear to play a critical role in the pathogenesis of NSAID-induced small intestinal injury. The phosphodiesterase inhibitors pentoxifylline and theophylline, but not thalidomide or anti-TNF-alpha antibodies were able to protect against diclofenac induced intestinal damage. Rolipram had a protective effect at high doses.

L16 ANSWER 21 OF 28 CAPLUS COPYRIGHT 2002 ACS  
AN 1998:341491 CAPLUS  
DN 129:12742  
TI Methods and compositions using thalidomide or other **angiogenesis** **-inhibitory** compound and **anti-inflammatory** agent for inhibition of angiogenesis  
IN D'Amato, Robert J.  
PA Children's Medical Center, USA  
SO PCT Int. Appl., 63 pp.  
CODEN: PIXXD2  
DT Patent  
LA English



FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9819649	A2	19980514	WO 1997-US20116	19971104
	WO 9819649	A3	19980625		
	W:	AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9851973	A1	19980529	AU 1998-51973	19971104
	EP 963200	A2	19991215	EP 1997-946884	19971104
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
PRAI	US 1996-28708P	P	19961105		
	US 1997-963058	A	19971103		
	WO 1997-US20116	W	19971104		
OS	MARPAT 129:12742				
AB	A group of compds. that effectively inhibit angiogenesis is provided. More specifically, thalidomide and various related compds., e.g. thalidomide precursors, analogs, metabolites and hydrolysis products, have been shown to inhibit angiogenesis and to treat disease states resulting from angiogenesis. Addnl., <b>antiinflammatory</b> drugs, such as steroids and NSAIDs can inhibit angiogenesis-dependent diseases either alone or in combination with thalidomide and related compds. Importantly, these compds. can be administered orally.				

L16 ANSWER 22 OF 28 USPATFULL

AN 1998:150927 USPATFULL

TI Methods for inhibiting angiogenesis, proliferation of endothelial or tumor cells and tumor growth

IN Backer, Joseph M., Tenafly, NJ, United States

Bohlen, Peter, Cortland Manor, NY, United States

PA American Cyanamid Company, Madison, NJ, United States (U.S. corporation)

PI US 5843925 19981201

AI US 1994-354694 19941213 (8)

DT Utility

FS Granted

EXNAM Primary Examiner: Sayala, Chhaya D.

LREP Nagy, Michael R.

CLMN Number of Claims: 16

ECL Exemplary Claim: 1

DRWN 2 Drawing Figure(s); 2 Drawing Page(s)

LN.CNT 861

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a method for inhibiting angiogenesis and proliferation of endothelial cells by administering an inhibitory amount of a 7-[substituted amino]-9-[(substituted glycyloamido)-6-demethyl-6-deoxytetracycline of Formula I: ##STR1## wherein R, R.sub.2, R.sub.3, and W are as defined in the specification. The invention also relates to a method for inhibiting proliferation of tumor cells and tumor growth by administering an inhibitory amount of a compound of Formula I in combination with a chemotherapeutic agent or radiation therapy. The invention also relates to compositions containing an effective inhibitory amount of a compound of Formula I in a pharmaceutically acceptable carrier.

L16 ANSWER 23 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1998:170942 BIOSIS

DN PREV199800170942

TI Thalidomide reduces vascular density in granulation tissue of



subcutaneously implanted polyvinyl alcohol sponges ion guinea pigs.  
 AU Or, Reuven (1); Feferman, Regina; Shoshan, Shmuel  
 CS (1) Dep. Bone Marrow Transplantation, Hadassah Univ. Hosp., P.O. Box  
 12000, Jerusalem 91120 Israel  
 SO Experimental Hematology (Charlottesville), (March, 1998) Vol. 26, No. 3,  
 pp. 217-221.  
 ISSN: 0301-472X.  
 DT Article  
 LA English  
 AB The efficacy of thalidomide in the treatment of erythema nodosum leprosum  
 is a well established fact; there is also accumulating evidence of its  
 therapeutic value in a number of other inflammatory and immune-mediated  
 conditions. In addition, thalidomide has been shown to be an  
**inhibitor of angiogenesis** induced by basic fibroblast  
 growth factor (bFGF). Nevertheless, its mechanism of action remains  
 speculative. Using guinea pigs, orally administered thalidomide  
 significantly enhanced the response of multinucleated foreign body giant  
 cells ( $p < 0.05$ ) in subcutaneously implanted polyvinyl alcohol sponges.  
 Furthermore, the drug exerted a dual effect in that it reduced vascular  
 density ( $p < 0.05$ ), which was not abolished by recombinant human bFGF, and  
 at the same time amplified the granulomatous response with and without  
 bFGF ( $p < 0.05$  and  $p < 0.01$ , respectively). The results of our experiments  
 represent a further step toward understanding the mechanism of action of  
 thalidomide, with implications for its potential use in wound healing and  
 scar formation as well as in the control of tumorigenesis.

L16 ANSWER 24 OF 28 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD  
 AN 1999-04355 DRUGU P S  
 TI Phosphodiesterase inhibitors prevent NSAID-induced small intestinal  
 injury: a role for tumour necrosis factor-alpha  
 AU Reuter B K; Wallace J L  
 CS Univ.Calgary  
 LO Calgary, Alb., Can.  
 SO Arch.Pharmacol. (358, No. 1, Suppl. 1, R352, 1998)  
 CODEN: NSAPCC ISSN: 0028-1298  
 AV University of Calgary, Calgary, Alberta, Canada T2N 4N1.  
 LA English  
 DT Journal  
 FA AB; LA; CT  
 FS Literature  
 AB The effects of i.p. phosphodiesterase inhibitors (pentoxifylline,  
 theophylline or thalidomide) were examined in a p.o. diclofenac-induced  
 small intestine injury model in rats. Pentoxifylline and theophylline,  
 but not thalidomide protected the rat small intestine from ulceration  
 caused by diclofenac. All 3 compounds inhibited the increase in  
 TNF-alpha levels caused by lipopolysaccharide. Pentoxifylline and  
 theophylline had protection against NSAID-induced small intestine injury,  
 but the action is not related to their ability to inhibit TNF-alpha  
 synthesis. (conference abstract: XIIIth International Congress of  
 Pharmacology, Munich, Germany, 1998).

L16 ANSWER 25 OF 28 USPATFULL  
 AN 97:68480 USPATFULL  
 TI Treatment of inflammatory and/or autoimmune dermatoses with thalidomide  
 alone or in combination with other agents  
 IN Andrulis, Jr., Peter J., Bethesda, MD, United States  
 Drulak, Murray W., Gaithersburg, MD, United States  
 PA Andrulis Pharmaceuticals, Beltsville, MD, United States (U.S.  
 corporation)  
 PI US 5654312 19970805  
 AI US 1995-475426 19950607 (8)  
 DT Utility  
 FS Granted  
 EXNAM Primary Examiner: Nutter, Nathan M.



LREP Angres, Isaac  
CLMN Number of Claims: 19  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 925

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods of treatment for inflammatory and autoimmune dermatoses which comprises topical and/or systemic administration of a therapeutically-effective amount of thalidomide alone or in combination with other dermatological agents.

L16 ANSWER 26 OF 28 CAPLUS COPYRIGHT 2002 ACS

AN 1997:593792 CAPLUS

DN 127:242709

TI Thalidomide may impede cell migration in primates by down-regulating integrin .beta.-chains: potential therapeutic utility in solid malignancies, proliferative retinopathy, inflammatory disorders, neointimal hyperplasia, and osteoporosis

AU Mccarty, M. F.

CS Nutrition 21, San Diego, CA, 92109, USA

SO Med. Hypotheses (1997), 49(2), 123-131

CODEN: MEHYDY; ISSN: 0306-9877

PB Churchill Livingstone

DT Journal; General Review

LA English

AB A review with 108 refs. A growing no. of human inflammatory disorders are reported to respond to treatment with thalidomide, and recently this drug has been shown to inhibit angiogenesis in the rabbit, in doses which can elicit teratogenicity in this species. Studies in marmosets and humans indicate that thalidomide, and a teratogenic analog, decrease the expression of .beta. integrin subunits, most notably .beta.3 and the .beta.2 produced by leukocytes. Since integrins are crucial for cell-matrix interactions, and the .beta.2 integrins of leukocytes mediate adhesion to endothelium, it is reasonable to postulate that thalidomide inhibits cell migration in susceptible species, and that this accounts for its **anti-inflammatory**, anti-angiogenic, and teratogenic activity. This perspective suggests that thalidomide will show utility in the prevention or treatment of a wide range of disorders, including solid tumors, proliferative retinopathies, many inflammatory diseases, neointimal hyperplasia, and osteoporosis. It is likely that dietary fish oil - as well as selective inhibitors of urokinase, when and if they become clin. available - will complement the efficacy of thalidomide in most if not all of these applications.

L16 ANSWER 27 OF 28 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1996:224768 BIOSIS

DN PREV199698780897

TI New uses of thalidomide.

AU Anonymous

SO Medical Letter (New Rochelle), (1996) Vol. 38, No. 968, pp. 15-16.

ISSN: 0025-732X.

DT Article

LA English

AB Investigational drug status has been granted to thalidomide in the US for clinical trials in erythema nodosum leprosum, aphthous ulcers in patients with and without HIV (human immunodeficiency virus) infection, Behcet's disease, chronic graft versus host disease, inflammatory dermatoses and AIDS (acquired immune deficiency syndrome) wasting. The immunomodulator has several serious side effects, the most common being teratogenicity. The drug is available from Celgene, Andrulis, and the FDA.

L16 ANSWER 28 OF 28 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1995-31063 DRUGU P

TI Thalidomide analogs suppress rat collagen arthritis.



AU Oliver S J; Cheng T P; Banquerigo L; Brahn E  
CS Univ. California  
LO Los Angeles, Cal., USA  
SO Arthritis Rheum. (38, No. 6, Suppl., R10, 1995)  
CODEN: ARHEAW ISSN: 0004-3591  
AV UCLA School of Medicine, Los Angeles 90024, U.S.A.  
LA English  
DT Journal  
FA AB; LA; CT  
FS Literature  
AB To evaluate therapeutic potential in collagen-induced arthritis (CIA), rats were administered p.o. thalidomide or either of 2 analogs, EM-12 or supidimide. Suppression of inflammatory synovitis was lower in all experimental groups. The EM-12 analog was the most efficacious and b.i.d. thalidomide was better than once daily. Incidence of arthritis onset was comparable among all groups. Strong cell-mediated and humoral responses to type II collagen (CII) were similar in the experimental and control groups. Results suggest that thalidomide and its analogs may be effective in treating inflammatory synovitis and that these benefits might be related to modulation of TNF-alpha and/or angiogenesis. (conference abstract).